

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.-7. (Cancelled)

~~1~~ 8. (Previously Presented) A connector comprising:

a housing having a first interior surface defining a first passage that extends in an axial direction between a first aperture and an intermediate portion of the housing, and a second interior surface defining a second passage that extends in the axial direction between a second aperture and the intermediate portion of the housing; and

a joining member for joining the housing to a second housing, said joining member having an exterior surface,

wherein said first interior surface includes a first mating surface, and said exterior surface includes a second mating surface,

wherein said first and second mating surfaces are configured such that the joining member can be inserted and thereby locked into the first axially extending passage,

wherein said first mating surface of the housing includes a plurality of protruding portions, each protruding portion extending in a direction perpendicular to said axial direction, each protruding portion having a saw-tooth cross section that is sloped towards the first aperture of the housing and flat towards the intermediate portion of the housing,

wherein said joining member has a first end and a second end thereof and extends in a longitudinal direction between said first and second ends thereof, and

wherein said second mating surface includes a plurality of protruding portions, each protruding portion extending in a direction perpendicular to said longitudinal direction, and each protruding portion having a saw-tooth cross section that is sloped towards said first end of the joining member and is flat towards said second end of the joining member,

wherein the exterior surface of the joining member extends between the first end of the joining member and the second end of the joining member and includes an intermediate portion thereof,

wherein said second mating surface extends between the first end of the joining member and the intermediate portion of the joining member,

wherein the exterior surface of the joining member includes a third mating surface that extends between the second end of the joining member and the intermediate portion of the joining member, and

wherein said third mating surface includes a plurality of protruding portions, each protruding portion extending in a direction perpendicular to said longitudinal direction, and each protruding portion having a saw-tooth cross section that is sloped towards the second end of the joining member and is flat towards the first end of the joining member,

wherein the first end of the joining member has an aperture formed therein,

wherein the joining member has an internal passage that extends longitudinally therein from said aperture in the first end of the joining member, and

wherein the joining member has a first slot formed therein between the exterior surface of the joining member and the internal passage of the joining member, the first slot extending in said longitudinal direction from the first end of the joining member to a point beyond the intermediate portion of the joining member.

²
9. (Previously Presented) A connector in accordance with claim 8,

wherein the joining member has a second slot formed therein between the exterior surface of the joining member and the internal passage of the joining member, the second slot extending in said longitudinal direction from the first end of the joining member to a point beyond the intermediate portion of the joining member, and

wherein the second slot is diametrically opposed to the first slot.

³
10. (Previously Presented) A connector in accordance with claim 9,

wherein the second end of the joining member has an aperture formed therein,

wherein the internal passage of the joining member extends longitudinally between

the aperture in the first end of the joining member and the aperture in the second end of the joining member,

wherein the joining member has a third slot formed therein between the exterior surface of the joining member and the internal passage of the joining member, the third slot extending in said longitudinal direction from the second end of the joining member to a point beyond the intermediate portion of the joining member,

wherein the joining member has a fourth slot formed therein between the exterior surface of the joining member and the internal passage of the joining member, the fourth slot extending in said longitudinal direction from the second end of the joining member to a point beyond the intermediate portion of the joining member, and

wherein the fourth slot is diametrically opposed to the third slot.

4
11. (Original) A connector in accordance with claim 10, wherein the joining member has a circular cross section, and wherein the first slot is offset from the third slot by an angle in a range of 80 degrees to 100 degrees measured from the center of the circular cross section of the joining member.

5
12. (Original) A connector in accordance with claim 11, wherein the first slot is offset from the third slot by an angle of 90 degrees measured from the center of the circular cross section of the joining member.

6
13. (Previously Presented) A connector comprising:
a housing having a first interior surface defining a first passage that extends in an axial direction between a first aperture and an intermediate portion of the housing, and a second interior surface defining a second passage that extends in the axial direction between a second aperture and the intermediate portion of the housing; and
a joining member for joining the housing to a second housing, said joining member having an exterior surface,
wherein said first interior surface includes a first mating surface, and said exterior surface includes a second mating surface,

wherein said first and second mating surfaces are configured such that the joining member can be inserted and thereby locked into the first axially extending passage,

wherein said first mating surface of the housing includes a plurality of protruding portions, each protruding portion extending in a direction perpendicular to said axial direction, each protruding portion having a saw-tooth cross section that is sloped towards the first aperture of the housing and flat towards the intermediate portion of the housing,

wherein the first mating surface includes a plurality of protruding portion areas, each protruding portion area extending in said axial direction between the first aperture of the housing and the intermediate portion of the housing, and each protruding portion area also extending in a direction perpendicular to said axial direction,

wherein the first mating surface further includes a plurality of non-protruding areas, and

wherein the protruding portion areas and non-protruding areas are alternately disposed in the direction perpendicular to said axial direction.

¹⁴
14. (Original) A connector in accordance with claim ⁶13, wherein the first mating surface has four protruding portion areas and four non-protruding areas, wherein the first mating surface has a circular cross section, and wherein each protruding portion area extends over an arc in a range of 40 degrees to 50 degrees from the center of the circular cross section of the housing.

⁸
15. (Original) A connector in accordance with claim ⁷14, wherein each protruding portion area and each non-protruding area extends over an arc of 45 degrees from the center of the circular cross section of the housing.

⁹
16. (Currently Amended) A connector in accordance with claim ¹[[1]] 8, wherein the housing is formed from a plastic material selected from a group consisting of polyphthalamide, polybutylene terephthalate, and polyamide 6.6.

¹⁰
17. (Original) A connector in accordance with claim ⁹16, wherein said plastic material is polyphthalamide.

¹¹
~~18.~~ (Currently Amended) A connector in accordance with claim ~~[[1]]~~ ¹ ~~8~~, wherein said joining member is formed from a plastic material selected from a group consisting of polyphthalamide, polybutylene terephthalate, and polyamide 6.6.

¹² ~~19.~~ (Original) A connector in accordance with claim ~~18~~ ¹¹, wherein said plastic material is polyphthalamide.

¹³
~~20.~~ (Currently Amended) A connector in accordance with claim ~~[[1]]~~ ¹ ~~8~~, wherein said housing is formed from a mixture which includes a thermoplastic polymer and glass fibers.

¹⁴ ~~21.~~ (Original) A connector in accordance with claim ~~20~~ ¹³, wherein the thermoplastic polymer is polyphthalamide.

¹⁵ ~~22.~~ (Original) A connector in accordance with claim ~~20~~ ¹³, wherein the glass fibers are a percentage of the mixture in a range of 45% to 55% by weight.

¹⁶ ~~23.~~ (Currently Amended) A connector in accordance with claim ~~[[1]]~~ ¹ ~~8~~, wherein the joining member is formed from a mixture which includes a thermoplastic polymer and glass fibers.

¹⁷ ~~24.~~ (Original) A connector in accordance with claim ~~23~~ ¹⁶, wherein the thermoplastic polymer is polyphthalamide.

¹⁸ ~~25.~~ (Original) A connector in accordance with claim ~~23~~ ¹⁶, wherein the glass fibers are a percentage of the mixture in a range of 45% to 55% by weight.

¹⁹ ~~26.~~ (Previously Presented) A connector comprising:
a housing having a first interior surface defining a first passage that extends in an axial direction between a first aperture and an intermediate portion of the housing, and a

second interior surface defining a second passage that extends in the axial direction between a second aperture and the intermediate portion of the housing; and
a joining member for joining the housing to a second housing, said joining member having an exterior surface,
wherein said first interior surface includes a first mating surface, and said exterior surface includes a second mating surface,
wherein said first and second mating surfaces are configured such that the joining member can be inserted and thereby locked into the first axially extending passage,
wherein the housing is formed from two corresponding halves, each provided with mechanical snap fittings to hold the two halves together when assembled.

20
27. (Currently Amended) A reinforced concrete sectional pile comprising:
a reinforcing bar molded into a concrete pile section, said reinforcing bar extending in a longitudinal direction;
a housing provided on an end of the reinforcing bar, said housing having a first interior surface defining a first passage that extends in said longitudinal direction between a first aperture and an intermediate portion of the housing, and a second interior surface defining a second passage that extends in said longitudinal direction between a second aperture and the intermediate portion of the housing,
wherein the end of the reinforcing bar is disposed within the second passage of the housing; and
a joining member for joining the housing to a second housing, said joining member having an exterior surface,
wherein said first interior surface includes a first mating surface, and said exterior surface includes a second mating surface,
wherein said first and second mating surfaces are configured such that the second member can be inserted and thereby locked into the first passage, and
wherein the first mating surface includes a plurality of protruding portions, each protruding portion extending in a direction perpendicular to said longitudinal direction.

each protruding portion having a saw-tooth cross section that is sloped towards the first aperture of the housing and flat towards the intermediate portion of the housing.

²¹
28. (Currently Amended) A ~~connector~~ reinforced concrete sectional pile in accordance with claim ²³~~27~~, wherein the housing has an extending portion which extends radially from an external side of the housing.

²²
29. (Currently Amended) A ~~connector~~ reinforced concrete sectional pile in accordance with claim ²⁷~~28~~, wherein the external side of the housing has a plurality of extending portions extending radially therefrom, each extending portion also extending in said longitudinal direction between the second aperture of the housing and the intermediate portion of the housing, wherein said extending portion is one of the plurality of extending portions.

~~23~~ ²⁴
30. (Currently Amended) A ~~connector~~ reinforced concrete sectional pile in accordance with claim ²³~~34~~ ²⁴[[27]], wherein ~~[[the]]~~ said first and second mating surfaces are configured such that the second member can be inserted and thereby locked into the first passage, wherein the first mating surface includes a plurality of protruding portions, each protruding portion extending in a direction perpendicular to said longitudinal direction, each protruding portion having a saw-tooth cross section that is sloped towards the first aperture of the housing and flat towards the intermediate portion of the housing.

~~31~~ ²⁴
31. (Currently Amended) A ~~connector~~ reinforced concrete sectional pile in accordance with claim ²⁴~~30~~,

wherein the joining member has a first end and a second end thereof and extends in an axial direction between said first end and said second end, and

wherein the second mating surface includes a plurality of protruding portions, each protruding portion extending in a direction perpendicular to said axial direction, and each protruding portion having a saw-tooth cross section that is sloped towards the first end of the joining member and is flat towards the second end of the joining member.

Application No. 10/022,131
Amendment dated November 3, 2004
Reply to Office Action of August 17, 2004

²⁶
~~32.~~ (Currently Amended) A reinforced concrete pile connector in accordance with claim 27, comprising:
a reinforcing bar molded into a concrete pile section, said reinforcing bar extending in a longitudinal direction;
a housing provided on an end of the reinforcing bar, said housing having a first interior surface defining a first passage that extends in said longitudinal direction between a first aperture and an intermediate portion of the housing, and a second interior surface defining a second passage that extends in said longitudinal direction between a second aperture and the intermediate portion of the housing,
wherein the end of the reinforcing bar is disposed within the second passage of the housing; and
a joining member for joining the housing to a second housing, said joining member having an exterior surface,
wherein said first interior surface includes a first mating surface, and said exterior surface includes a second mating surface, and
wherein the housing is formed from a mixture which includes a thermoplastic polymer and glass fibers.

²⁷
~~33.~~ ²⁶ (Currently Amended) A ~~connector~~ reinforced concrete pile in accordance with claim 32, wherein the thermoplastic polymer is selected from a group consisting of polyphthalamide, polybutylene terephthalate, and polyamide 6.6.

²³
~~34.~~ (Currently Amended) A reinforced concrete pile connector in accordance with claim 27, comprising:
a reinforcing bar molded into a concrete pile section, said reinforcing bar extending in a longitudinal direction;
a housing provided on an end of the reinforcing bar, said housing having a first interior surface defining a first passage that extends in said longitudinal direction between a first aperture and an intermediate portion of the housing, and a second interior surface

Application No. 10/022,131
Amendment dated November 3, 2004
Reply to Office Action of August 17, 2004

defining a second passage that extends in said longitudinal direction between a second aperture and the intermediate portion of the housing,

wherein the end of the reinforcing bar is disposed within the second passage of the housing; and

a joining member for joining the housing to a second housing, said joining member having an exterior surface,

wherein said first interior surface includes a first mating surface, and said exterior surface includes a second mating surface, and

wherein the joining member is formed from a mixture which includes a thermoplastic polymer and glass fibers.

²³
~~38.~~ ²³ (Currently Amended) A connector reinforced concrete pile in accordance with claim ~~34~~, wherein the thermoplastic polymer is selected from a group consisting of polyphthalamide, polybutylene terephthalate, and polyamide 6.6.